

**Course Outcome 1****Experiment 1****Date:****Basic Java Programs****Aim:**

Write the following programs

i) Print the prime numbers up to a limit

**Program**

```
import java.io.*;
class PrimeInLimit
{
    public static void main(String args[]) throws IOException
    {
        DataInputStream x=new DataInputStream(System.in);
        System.out.println("Enter Limit");
        int n=Integer.parseInt(x.readLine());
        System.out.println("Prime numbers up to "+n+":");
        for(int num = 2; num <= n; num++)
        {
            int flag=0;
            for (int i = 2; i<num/2; i++)
            {
                if (num % i == 0)
                {
                    flag=1;
                    break;
                }
            }
            if(flag==0)
            {
                System.out.println(num);
            }
        }
    }
}
```

**Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java PrimeInLimit

Enter Limit

15

Prime numbers up to 15:

2

3

4

5

7

11

13

ii) Print the 3-digit Armstrong numbers between two intervals.

**Program**

```
import java.io.*;
class ArmstrongInLimit
{
    public static void main(String args[]) throws IOException
    {
        DataInputStream x=new DataInputStream(System.in);
        System.out.println("Enter Limit 1");
        int num1=Integer.parseInt(x.readLine());
        System.out.println("Enter Limit 2");
        int num2=Integer.parseInt(x.readLine());
        System.out.println("Armstrong Numbers:");
        for (int i = num1; i<num2; i++)
        {
            int n=0;
            int temp=i;
            while (temp != 0)
            {
                temp=temp/10;
                n=n+1;
            }
            int sum=0;
            temp=i;
            while (temp != 0)
            {
```

```
int digit=temp%10;
sum=sum+(int)Math.pow(digit,n);
temp=temp/10;
}
if (sum==i)
{
System.out.println(i);
}
}
}
}
```

**Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java ArmstrongInLimit

Enter Limit 1:

100

Enter Limit 2:

500

Armstrong Numbers:

153

370

371

407

**Experiment 2****Date:****One-Dimensional Array****Aim:**

Write a Java program to search an element in an array

**Program**

```
import java.io.*;
class ElementCheck
{
    public static void main(String args[]) throws IOException
    {
        DataInputStream x=new DataInputStream(System.in);
        System.out.println("enter limit of array");
        int n=Integer.parseInt(x.readLine());
        int a[]=new int[n];
        System.out.println("enter elements");
        for(int i=0;i<n;i++)
        {
            a[i]=Integer.parseInt(x.readLine());
        }
        System.out.println("elements");
        for(int i=0;i<n;i++)
        {
            System.out.print(a[i]+" ");
        }
        System.out.println();
        int c=1,flag=0;
        System.out.println("enter element to check");
        int y=Integer.parseInt(x.readLine());
        for(int i=0;i<n;i++)
        {
            if(a[i]==y)
            {
                flag=1;
                break;
            }
            c=c+1;
        }
        if(flag==1)
```

```
{
System.out.println("element found at position "+c);
}
else
{
System.out.println("element not found");
}
}
}
```

**Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java ElementCheck

enter limit of array

4

enter elements

8

4

6

2

elements

8 4 6 2

enter element to check

6

element found at position 3

mits@mits-Veriton-M200-H510:~/gokul java\$ java ElementCheck

enter limit of array

4

enter elements

8

4

6

2

elements

8 4 6 2

enter element to check

10

element not found

**Experiment 3****Date:****Two-Dimensional Array****Aim:**

Write a program to read a matrix from the console and check whether it is symmetric or not.

**Program**

```
import java.io.*;
class SymmetricMatrix
{
    public static void main(String args[]) throws IOException
    {
        int flag=0;
        DataInputStream x=new DataInputStream(System.in);
        System.out.println("Enter order of matrix");
        int n=Integer.parseInt(x.readLine());
        int a[][]=new int[n][n];
        System.out.println("Enter elements of Matrix");
        for(int i=0;i<n;i++)
        {
            for(int j=0;j<n;j++)
            {
                a[i][j]=Integer.parseInt(x.readLine());
            }
        }
        System.out.println("Matrix elements");
        for(int i=0;i<n;i++)
        {
            for(int j=0;j<n;j++)
            {
                System.out.print(a[i][j]+" ");
            }
            System.out.println();
        }
        for(int i=0;i<n;i++)
        {
            for(int j=0;j<n;j++)
            {
                if(a[i][j]!=a[j][i])
```

```
{
flag=1;
break;
}
}
}
if(flag==0)
{
System.out.println("Matrix is Symmetric");
}
else
{
System.out.println("Matrix is not Symmetric");
}
}
}
```

**Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java SymmetricMatrix

Enter order of matrix

3

Enter elements of Matrix

1

0

1

0

1

0

1

0

1

Matrix elements

1 0 1

0 1 0

1 0 1

Matrix is Symmetric

mits@mits-Veriton-M200-H510:~/gokul java\$ java SymmetricMatrix

Enter order of matrix

3

Enter elements of Matrix

1

0

4

5

1

6

1

0

5

Matrix elements

1 0 4

5 1 6

1 0 5

Matrix is not Symmetric



**Experiment 4****Date:****String Handling Methods- 1****Aim:**

Perform the following operations on strings

- i. Find the length of the string
- ii. Character at second and fourth position
- iii. Find the sub string using start index only
- iv. Find the sub string using start index and end index
- v. Compare two strings lexicographically.
- vi. Compare two strings lexicographically, ignoring case differences.
- vii. Concatenate a given string to the end of another string.
- viii. Replace a specified character with another character.
- ix. Check whether a given string starts with another string.
- x. Convert all characters in a string to lowercase
- xii. Convert all characters in a string to uppercase.

**Program**

```
import java.io.*;
class StringOperations
{
    public static void main(String args[]) throws IOException
    {
        DataInputStream x=new DataInputStream(System.in);
        System.out.println("1.Length of string");
        System.out.println("Enter a string");
        String s=x.readLine();
        System.out.println("string is: "+s);
        System.out.println("length of string is: "+s.length());
        System.out.println();

        System.out.println("2.Character At Position");
        System.out.println("Character at second position: "+s.charAt(1));
        System.out.println("Character at fourth position: "+s.charAt(3));
        System.out.println();

        System.out.println("3.Substring Using Start Index");
        System.out.println("Enter start index");
        int st=Integer.parseInt(x.readLine());
```

```
System.out.println("Substring from start index: "+s.substring(st));  
System.out.println();
```

```
System.out.println("4.Substring Using Start and End Index");  
System.out.println("Enter start index");  
int st1=Integer.parseInt(x.readLine());  
System.out.println("Enter end index");  
int ed=Integer.parseInt(x.readLine());  
System.out.println("Substring from start to end index: "+s.substring(st1,ed));  
System.out.println();
```

```
System.out.println("5.Compare Strings");  
System.out.println("Enter a new string1");  
String s8=x.readLine();  
System.out.println("Enter a new string2");  
String s9=x.readLine();  
if(s8.equals(s9))  
{  
System.out.println("String equal");  
}  
else  
{  
System.out.println("String not equal");  
}  
System.out.println();
```

```
System.out.println("6.Compare Strings(Ignore Case)");  
System.out.println("Enter a new string1");  
String s10=x.readLine();  
System.out.println("Enter a new string2");  
String s11=x.readLine();  
if(s10.equalsIgnoreCase(s11))  
{  
System.out.println("String equal");  
}  
else  
{  
System.out.println("String not equal");  
}  
System.out.println();
```

```
System.out.println("7.Concatenate Strings");
System.out.println("Enter a new string1");
String s1=x.readLine();
System.out.println("Enter a new string2");
String s2=x.readLine();
System.out.println("After Concatenate: "+s1.concat(s2));
System.out.println();
```

```
System.out.println("8.Character Replace");
System.out.println("Enter a new string");
String s3=x.readLine();
System.out.println("Enter a character to replace");
char ch1=(x.readLine().charAt(0));
System.out.println("Enter new character");
char ch2=(x.readLine().charAt(0));
System.out.println("After Replace: "+s3.replace(ch1,ch2));
System.out.println();
```

```
System.out.println("9.Start With a String");
System.out.println("Enter a new string");
String s4=x.readLine();
System.out.println("Enter start string");
String s5=x.readLine();
if(s4.startsWith(s5))
{
System.out.println("String start with "+s5);
}
else
{
System.out.println("String not start with "+s5);
}
System.out.println();
```

```
System.out.println("10.Uppercase");
System.out.println("Enter a new string");
String s6=x.readLine();
System.out.println("Uppercase: "+s6.toUpperCase());
System.out.println();
```

```
System.out.println("11.Lowercase");
```

```
System.out.println("Enter a new string");
String s7=x.readLine();
System.out.println("Lowercase: "+s7.toLowerCase());
}
}
```

**Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java StringOperations

**1.Length of string**

Enter a string

gokulrajc

string is:

length of string is: 9

**2.Character At Position**

Character at second position: o

Character at fourth position: u

**3.Substring Using Start Index**

Enter start index

4

Substring from start index:

ulrajc

**4.Substring Using Start and End Index**

Enter start index

2

Enter end index

6

Substring from start to end index:

Okul

**5.Compare Strings**

Enter a new string1

abcd

Enter a new string2

ABCD

String not equal

**6.Compare Strings(Ignore Case)**

Enter a new string1

abcd

Enter a new string2

ABCD

String equal

#### 7.Concatenate Strings

Enter a new string1

gokul

Enter a new string2

raj

After Concatenate:

gokulraj

#### 8.Character Replace

Enter a new string

malayalam

Enter a character to replace

m

Enter new character

x

After Replace:

xalayalax

#### 9.Start With a String

Enter a new string

hi welcome

Enter start string

hi

String start with hi

#### 10.Uppercase

Enter a new string

abcd

Uppercase: ABCD

#### 11.Lowercase

Enter a new string

ABCD

Lowercase: abcd

**Experiment 5****Date:****String Handling Methods- 2****Aim:**

Write a java program to

- i. Check whether a given string is palindrome or not.

**Program**

```
import java.io.*;
class StringPallindrome
{
public static void main(String args[]) throws IOException
{
DataInputStream x=new DataInputStream(System.in);
System.out.println("Enter a string");
String s1=x.readLine();
String s2="";
System.out.println("String:"+s1);
int l = s1.length();
for(int i=l-1;i>=0;i--)
{
s2=s2+s1.charAt(i);
}
System.out.println("Reversed String:"+s2);
if(s1.equals(s2))
{
System.out.println("pallindrome");
}
else
{
System.out.println("not pallindrome");
}
}
}
```

**Output**

```
mits@mits-Veriton-M200-H510:~/gokul java$ java StringPallindrome
Enter a string
malayalam
```

String:malayalam  
Reversed String:malayalam  
pallindrome

mits@mits-Veriton-M200-H510:~/gokul java\$ java StringPallindrome  
Enter a string  
welcome  
String:welcome  
Reversed String:emoclew  
not pallindrome

ii. Sorting a given list of names in ascending order

**Program**

```
import java.io.*;
class NameSort
{
    public static void main(String args[]) throws IOException
    {
        DataInputStream x=new DataInputStream(System.in);
        System.out.println("Enter limit");
        int n=Integer.parseInt(x.readLine());
        String str[]=new String[n];
        String temp;
        System.out.println("Enter names");
        for(int i=0;i<n;i++)
        {
            str[i]=x.readLine();
        }
        for (int i=0;i<n;i++)
        {
            for (int j=0;j<n;j++)
            {
                if(str[i].compareTo(str[j]) > 0)
                {
                    temp=str[i];
                    str[i]=str[j];
                    str[j]=temp;
                }
            }
        }
    }
}
```

```
}  
System.out.println();  
System.out.println("Names");  
for(int i=0;i<n;i++)  
{  
System.out.println(str[i]);  
}  
}  
}
```

**Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java NameSort

Enter limit

5

Enter names

thomas

abhijith

allen

gokul

adwaith

Names

abhijith

adwaith

allen

gokul

thomas



**Experiment 6****Date:****StringBuffer Class Methods****Aim:**

Write a program in java for string handling which performs the following

- i. Check the capacity of the StringBuffer object.
- ii. Reverse the content of this string and convert the resultant string in upper case
- iii. Read another string and append it to the resultant string of above.

**Program**

```
import java.io.*;
class StringBufferExample
{
    public static void main(String args[]) throws IOException
    {
        DataInputStream d = new DataInputStream(System.in);
        System.out.println("Enter a string:");
        String str = (d.readLine());
        StringBuffer s = new StringBuffer(str);
        System.out.println("Capacity is "+s.capacity());
        s.reverse();
        String s2 = s.toString().toUpperCase();
        StringBuffer ss = new StringBuffer(s2);
        System.out.println("After resversing and converting to uppercasing: "+ss);
        System.out.println("Enter a string to append:");
        String s1 = (d.readLine());
        System.out.println("New String: "+ss.append(s1));
    }
}
```

**Output**

```
mits@mits-Veriton-M200-H510:~/gokul java$ java StringBufferExample
```

```
Enter a string:
```

```
gokul
```

```
Capacity is 21
```

```
After resversing and converting to uppercasing: LUKOG
```

```
Enter a string to append:
```

```
raj
```

```
New String: LUKOGraj
```

## **Course Outcome 2**

### **Experiment 7**

**Date:**

#### **Initialize instance variables using class and method**

##### **Aim:**

Program to demonstrate use of command line arguments to initialize values to member variables in a class and to display them.

**Hint:-** Create a class containing Rlno, stud\_name, engmark, mathsmark, totalmark. While executing the program we have to pass arguments through command line. These values are obtained in an array which is passed as argument to main function, here it is args[ ]. The marks are converted correspondingly and then passed to constructor where values are stored to class variables. Find the total marks and later displayed using display function.

##### **Program**

```
class Student
{
    int rollno;
    String name;
    int eng;
    int math;
    int total;
    Student(int r,String s,int e,int m)
    {
        rollno=r;
        name=s;
        eng=e;
        math=m;
    }
    void totalmark()
    {
        total=eng+math;
    }
    void display()
    {
        System.out.println("roll no: "+rollno);
        System.out.println("name: "+name);
        System.out.println("english mark: "+eng);
        System.out.println("maths mark: "+math);
    }
}
```

```
System.out.println("total mark: "+total);
}
}
class TotalMark
{
public static void main(String args[])
{
int r=Integer.parseInt(args[0]);
String s=args[1];
int e=Integer.parseInt(args[2]);
int m=Integer.parseInt(args[3]);
Student s1=new Student(r,s,e,m);
s1.totalmark();
s1.display();
}
}
```

**Output**

```
mits@mits-Veriton-M200-H510:~/gokul java$ java TotalMark 29 gokul 60 70
roll no: 29
name: gokul
english mark: 60
maths mark: 70
total mark: 130
```

**Experiment 8****Date:****Initialize instance variables inside the class using constructor****Aim:**

Program to demonstrate use of constructors to initialize values to member variables in a class and to display them.

**Hint:-** empno , empname and salary are the class members of the class employee1. From the main function we are passing the values directly to a constructor, the constructor initializes the values to member variables. The display function is used to display the stored values of the member variables.

**Program**

```
import java.io.*;
class Employee
{
    int empno;
    String empname;
    int salary;
    Employee(int r,String n,int s)
    {
        empno=r;
        empname=n;
        salary=s;
    }
    void display()
    {
        System.out.println("employee details");
        System.out.println("employee no: "+empno);
        System.out.println("employee name: "+empname);
        System.out.println("salary: "+salary);
    }
}
class EmployeeDetails
{
    public static void main(String args[]) throws IOException
    {
        DataInputStream x=new DataInputStream(System.in);
        System.out.println("enter employee no");
        int r=Integer.parseInt(x.readLine());
```

```
System.out.println("enter employee name");
String n=x.readLine();
System.out.println("enter employee salary");
int s=Integer.parseInt(x.readLine());
Employee e1=new Employee(r,n,s);
e1.display();
}
}
```

**Output**

```
mits@mits-Veriton-M200-H510:~/gokul java$ java EmployeeDetails
enter employee no
101
enter employee name
Gokul raj c
enter employee salary
25000
employee deatils
employee no: 101
employee name: Gokul raj c
salary: 25000
```

**Experiment 9****Date:****Matrix Operations****Aim:**

Read 2 matrices from the console and perform matrix addition and multiplication using class and object.

**Program**

```
import java.io.*;
class Matrix
{
    int row;
    int cols;
    int arr[][];
    int arr1[][];
    int arr2[][];
    Matrix(int r,int c)
    {
        row=r;
        cols=c;
        arr=new int[r][c];
    }

    void readMatrix(DataInputStream x) throws IOException
    {
        for(int i=0;i<row;i++)
        {
            for(int j=0;j<cols;j++)
            {
                arr[i][j]=Integer.parseInt(x.readLine());
            }
        }
    }

    void displayMatrix()
    {
        for(int i=0;i<row;i++)
        {
            for(int j=0;j<cols;j++)
```

```
{
System.out.print(arr[i][j]+" ");
}
System.out.println();
}
}

void addMatrix(Matrix other)
{
if((row != other.row) || (cols != other.cols))
{
System.out.println("addition not possible");
}
else
{
arr1=new int[row][cols];
for(int i=0;i<row;i++)
{
for(int j=0;j<cols;j++)
{
arr1[i][j]=arr[i][j]+other.arr[i][j];
System.out.print(arr1[i][j] +" ");
}
System.out.println();
}
}
}

void mulMatrix(Matrix other)
{
if(other.row != other.cols)
{
System.out.println("multiplication not possible");
}
else
{
arr2=new int[row][other.cols];
for(int i=0;i<row;i++)
{
for(int j=0;j<other.cols;j++)
```

```
{
for(int k=0;k<cols;k++)
{
arr2[i][j]=arr2[i][j]+(arr[i][k]*other.arr[k][j]);
}
System.out.print(arr2[i][j] +" ");
}
System.out.println();
}
}
}

}

class MatrixAddMul
{
public static void main(String args[]) throws IOException
{
DataInputStream x = new DataInputStream(System.in);
System.out.println("enter row of matrix1:");
int r1=Integer.parseInt(x.readLine());
System.out.println("enter column of matrix1:");
int c1=Integer.parseInt(x.readLine());
Matrix m1 = new Matrix(r1,c1);
System.out.println("enter values of matrix1:");
m1.readMatrix(x);

System.out.println("enter row of matrix2:");
int r2=Integer.parseInt(x.readLine());
System.out.println("enter column of matrix2:");
int c2=Integer.parseInt(x.readLine());
Matrix m2 = new Matrix(r2,c2);
System.out.println("enter values of matrix1:");
m2.readMatrix(x);

System.out.println("matrix1:");
m1.displayMatrix();
System.out.println("matrix2:");
m2.displayMatrix();
System.out.println("matrix addition:");
```



```
m1.addMatrix(m2);
System.out.println("matrix multiplication:");
m1.mulMatrix(m2);
}
}
```

**Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java MatrixAddMul

enter row of matrix1:

2

enter column of matrix1:

2

enter values of matrix1:

1

2

3

4

enter row of matrix2:

2

enter column of matrix2:

2

enter values of matrix1:

5

6

7

8

matrix1:

1 2

3 4

matrix2:

5 6

7 8

matrix addition:

6 8

10 12

matrix multiplication:

19 22

43 50

**Experiment 10****Date:****Complex Number Addition****Aim:**

Write a Java program to add to complex numbers using object as argument

**Program**

```
import java.io.*;
class Complex
{
    int real;
    int imag;
    Complex(int r,int i)
    {
        real = r;
        imag = i;
    }
    void addNumber(Complex other)
    {
        int real1;
        int imag1;
        real1=real+other.real;
        imag1=imag+other.imag;
        System.out.println(real1 + " + " + imag1 + "i");
    }

    void display()
    {
        System.out.println(real + " + " + imag + "i");
    }
}

public class ComplexAddition
{
    public static void main(String args[]) throws IOException
    {
        int a1,a2,b1,b2;
        DataInputStream x=new DataInputStream(System.in);
        System.out.println("Complex number 1");
```

```
System.out.println("Enter complex parts:");
a1= Integer.parseInt(x.readLine());
System.out.println("Enter imaginary parts:");
b1= Integer.parseInt(x.readLine());
Complex c1=new Complex(a1,b1);
System.out.println("Complex number 2");
System.out.println("Enter complex parts:");
a2= Integer.parseInt(x.readLine());
System.out.println("Enter imaginary parts:");
b2= Integer.parseInt(x.readLine());
Complex c2=new Complex(a2,b2);

System.out.println("Complex number 1");
c1.display();
System.out.println("Complex number 2");
c2.display();
System.out.println("Complex number addition");
c1.addNumber(c2);
}
}
```

### **Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java ComplexAddition

Complex number 1

Enter complex parts:

2

Enter imaginary parts:

3

Complex number 2

Enter complex parts:

4

Enter imaginary parts:

5

Complex number 1

2 + 3i

Complex number 2

4 + 5i

Complex number addition

6 + 8i

**Experiment 11****Date:****Class and Objects****Aim:**

Define a class 'product' with data members pcode, pname and price. Create 3 objects of the class and find the product having the lowest price.

**Program**

```
class Product
{
    int price;
    String pcode, pname;
    Product(String code, String name, int pri)
    {
        pcode = code;
        pname = name;
        price = pri;
    }
    void display()
    {
        System.out.println("Code: " +pcode);
        System.out.println("Name: " +pname);
        System.out.println("Price: " +price);
    }
}

class ProductDetails
{
    public static void main(String args[])
    {
        Product p1 = new Product("p1", "Mobile", 13000);
        Product p2 = new Product("p2", "Watch", 6500);
        Product p3 = new Product("p3", "TV", 16000);
        System.out.println("Product with the lowest price");
        if (p1.price < p2.price && p1.price < p3.price)
        {
            p1.display();
        }
        else if (p2.price < p3.price)
```

```
{  
p2.display();  
}  
else  
{  
p3.display();  
}  
}  
}
```

**Output**

mits@mits-Veriton-M200-H510:~/gokul java\$ java ProductDetails

Product with the lowest price

Code: p2

Name: Watch

Price: 6500

**Experiment 12****Date:****Inner class and Static nested class****Aim:**

Create CPU with attribute price. Create inner class Processor with attributes no. of cores, manufacturer and static nested class RAM with attributes memory and manufacturer. Create an object of CPU class and print information of Processor and RAM.

**Program**

```
import java.util.*;
class CPU
{
    int price;
    CPU(int price)
    {
        this.price = price;
    }
    void display()
    {
        System.out.println("CPU Info:");
        System.out.println("CPU Price:" +price+ " Rs");
    }

    class Processor
    {
        int cores;
        String manufacturer;
        Processor(int cores, String manufacturer)
        {
            this.cores = cores;
            this.manufacturer = manufacturer;
        }
        void displayProcessorInfo()
        {
            System.out.println("Processor Info:");
            System.out.println("Cores: " + cores);
            System.out.println("Manufacturer: " + manufacturer);
        }
    }
}
```

```
static class RAM
{
int memory;
String manufacturer;
RAM(int memory, String manufacturer)
{
this.memory = memory;
this.manufacturer = manufacturer;
}
void displayRAMInfo()
{
System.out.println("RAM Info:");
System.out.println("Memory: " + memory + " GB");
System.out.println("Manufacturer: " + manufacturer);
}
}
}
```

```
class CpuDetails
{
public static void main(String[] args)
{
Scanner sc=new Scanner(System.in);
System.out.print("Enter Processor Price");
int price=sc.nextInt();
CPU c1=new CPU(price);

System.out.print("Enter Number of Cores");
int cor=sc.nextInt();
sc.nextLine();
System.out.print("Enter Processor Manufacturer");
String manf=sc.nextLine();
CPU.Processor p1 = c1.new Processor(cor, manf);

System.out.print("Enter Memory");
int mem = sc.nextInt();
sc.nextLine();
System.out.print("Enter RAM Manufacturer");
String manf1 = sc.nextLine();
CPU.RAM r1 = new CPU.RAM(mem, manf1);
```

```
c1.display();  
p1.displayProcessorInfo();  
r1.displayRAMInfo();  
}  
}
```

**Output**

its@mits-Veriton-M200-H510:~/gokul java\$ java CpuDetails

Enter Processor Price

45000

Enter Number of Cores

8

Enter Processor Manufacturer

Intel

Enter Memory

16

Enter RAM Manufacturer

Kingston

CPU Info:

CPU Price: 45000 RS

Processor Info:

Cores: 8

Manufacturer: Intel

RAM Info:

Memory: 16 GB

Manufacturer: Kingston



**Experiment 13****Date:****Array of objects****Aim:**

Program to create a class for Employee having attributes eNo, eName, eSalary. Read 'n' employee information and Search for an employee given eNo, using the concept of array of Objects.

**Program**

```
import java.util.*;
class Employee
{
    int eNo;
    String eName;
    double eSalary;
    Employee(int no, String name, double salary)
    {
        eNo = no;
        eName = name;
        eSalary = salary;
    }
    void display() {
        System.out.println("Employee Number: " + eNo);
        System.out.println("Employee Name: " + eName);
        System.out.println("Employee Salary: " + eSalary);
    }
}
class EmployeeSearch
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter number of employees");
        int n = sc.nextInt();
        sc.nextLine();
        Employee e1[] = new Employee[n];
        for (int i = 0; i < n; i++)
        {
            System.out.print("Enter Employee Number");
```

```
int no=sc.nextInt();
sc.nextLine();
System.out.print("Enter Employee Name");
String name = sc.nextLine();
System.out.print("Enter Employee Salary");
double salary = sc.nextDouble();
e1[i] = new Employee(no, name, salary);
}
System.out.print("Enter Employee Number to Search");
int sNo = sc.nextInt();
int flag=0;

for (int k = 0; k < n; k++)
{
if (e1[k] != null && e1[k].eNo == sNo)
{
flag=1;
System.out.println("Employee Found");
e1[k].display();
break;
}
}
if (flag==0)
{
System.out.println("Employee not found");
}
}
}
```

**Output**

```
mits@mits-Veriton-M200-H510:~/gokul java$ java EmployeeSearch
Enter number of employees
3
Enter Employee Number
101
Enter Employee Name
gokul
Enter Employee Salary
50000
Enter Employee Number
```

102

Enter Employee Name

abhijith

Enter Employee Salary

56000

Enter Employee Number

103

Enter Employee Name

adwaith

Enter Employee Salary

60000

Enter Employee Number to Search

101

Employee Found

Employee Number: 101

Employee Name: gokul

Employee Salary: 50000